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ABSTRACT OF THE DISCLOSURE

Preferred embodiments of the invention include purification of DNA, preferably plasmid DNA, by use of selective precipitation, preferably by addition of compaction agents

Also included is a scaleable method for the liquid-phase separation of DNA from RNA. RNA may also be recovered by fractional precipitation according to the invention.

RNA, commonly the major contaminant in DNA preparations, can be left in solution while valuable purified plasmid DNA is directly precipitated. Endotoxin can also be kept to very low levels.

The invention includes mini-preps, preferably of plasmid and chromosomal DNA to obtain sequenceable and restriction digestible DNA in high yields in multiple simultaneous procedures.

As a method of assay, a labeled probe is precipitated by hybridizing it to a target, (e.g. chromosomal DNA, oligonucleotides, Ribosomal RNA, tRNA), and thereafter precipitating the probe/target complex with compaction agents and leaving in solution any unhybridized probe.